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Working Against and With Translation

Shannon Criss, University of Kansas, March'08

abstract

Stripping preconceptions and moving students into situations that sponsor heightened awareness is fundamental to the beginning architecture student. Believing that architectural experience is grounded in the tectonic language of building and the embodiment of materiality and form through our senses--students touch, remember, imagine, and measure a set of objects. By having students directly engage found objects through a series of drawing exercises, students experience themselves in the object and the object exists through their embodied experience. The object and the body supplement and define each other. The student dwells in the object and the object dwells in the student.

By having students dim their sharpness of vision and gain a sense of unconscious peripheral vision, they gain the ability to both *see* the complexity of real form and space while also gaining an ability to *imagine* the intangible and abstract. This essay will explore the premise that thinking by drawing is the primary way that architects extend their understanding of architecture. It suggests that drawing and translating drawings into form is the architect's unique mode of inquiry and is the place for the student's most basic and crucial speculative endeavors. A collection of work developed by beginning architecture students will demonstrate this premise. Students' interpretations were both precise and particular while simultaneously being abstract and open-ended. This paper attempts to illustrate the repeated, slow and messy path to finding productive working space in the beginning design student. Ultimately, this processing is in pursuit of helping the student find their way towards an architecture that mediates experience fully engaged in the senses.

[1] Figure 1: pastel drawing was done by Wes Harp, a student from Mississippi State University.

context

I believe there to be three challenges we face as we accept students into our beginning design studios: how 'teachers' are perceived as administers of knowledge, how knowledge is perceived as 'facts,' and that vision is given priority over the other senses. These challenges ultimately ask us to consider the approaches we take as faculty and the nature of the instructions we give to our students. To not challenge this, leaves the student mostly complacent and willing to *receive* 'knowledge' in an external, applied way rather than depending upon herself to generate those questions that lead to integrated learning through the highest form of *knowing.* This paper proposes that we best *know* something through our bodies.

First, it is common that students have come from learning environments where information is provided from a top-down approach--instructions are given by 'instructors.' Often, the classroom setting is set up so that students go to school to learn from instructors rather than being asked to observe, reflect and consider issues before them. Information is 'handed down' rather than internally motivated. I believe that this attitude about how we understand our world is deeply rooted in society, one that is patriarchal in its most basic way. How we teach may very well reflect deeper cultural attitudes and hierarchies that have established a pattern of learning that has created the passive student. It is an approach that has established instruction as a top-down endeavor rather than one that asks the student to initiate thought and discovery. Students tend to trust the teacher's knowledge-authority as expert over their own; knowledge is from higher authorities rather than created within themselves.

Second, this brings us to the idea that 'knowledge' exists in precise and factual ways. The most common request is for instructors to give the 'facts' of information or the conceptual principles that define the boundaries of a project. I find students tend to rely on *ideas* to initiate their projects—conceptual notions rather than relying upon their intuition and multiple senses to guide them in their creative work. It is much easier to rely upon 'rules' given by the instructor that help them define their work; it is common for students to be disconnected and distrustful of the sensual and embodied essence of place, form and idea. I believe a lot of this is credited to the how students generally have grown up in high-school environments where concepts are presented and by memorization, they are handed 'knowledge' of which they are then tested on with multiple-choice questions, true& false, etc.

And finally, this leads to the notion that by processing information through concepts, that the multiple senses are only supportive to larger notions. It seems possible that our students come to us through established education-cultures that define 'knowledge' and sight dominating over the other senses. The internal, intuitive base for critical-knowing has not been exercised properly by the time students reach their first design studio experience. It is there that we must begin and draw this out—and I would argue that this begins in the student's subconscious and the peripheral spaces surrounding her.

Juhani Pallasmaa in *Eyes of the Skin* makes a strong case that "the privileging of the sense of sight over the other senses is an inarguable theme in Western thought."[i] Our students are increasingly geared towards a highly focused and separate existence with their I-Pods, laptops and cell phones. Increasingly students are limiting their abilities to *be* in the world, fully engaging their multiple senses. It may be possible to even go as far to say that students arrive with a distrust of intuition, they discount it for more readily available solutions and concepts, to be instructed on *how* to draw and to trust others' authority over their own. We've knocked our senses askew, giving vision the highest regard. As buildings lose their connection with the wisdom of the body, they become isolated in the distant realm of vision. With the loss of tactility, measures and details crafted for the human body, architectural structures become flat, immaterial and unrelated to human imagination. Architecture becomes devoid of *authenticity* of matter and construction. The gap between students' capacities to engage the world and the need for architects capable of making architecture as physical space and place defined by topography, environment and culture is widening. Juhani Pallasmaa identifies architecture as, "as with all art, is fundamentally confronted with questions of human existence in space and time, it expresses and relates man's being in the world."[ii] It is our unique task to help the beginning design student to begin to understand that architecture is our primary instrument in relating us with space and time and giving space and time human measure in the process. With this increasing gap between capacity to be part of the world and imagine a place in the world, students are eager to find quick answers and *ideas* that generate their projects; ultimately, favoring an intellectual concept over an intuitively-arrived one.

a basic aim of architecture

Buildings have the potential to draw out our human capacities to be fully engaged. By visiting buildings first-hand, students can begin immediately to arrive at individual, sensory-based relationships with the built environment. In this course, we visited the art museum on our campus many times while also visiting Steven Holl's addition to the Nelson Art Museum.[iii] Students spent a few hours visiting, sketching and documenting their individual engagement with these buildings and their surrounding landscape. By directly relating to this place and focused upon their own bodily perceptions, students developed the verbal abilities to discuss and the drawing skills to convey those impressions. It is this very process of engaging in architecture and extracting particular qualities that students rehearse (perhaps learn for the first time?) their capacities to internalize and engage their fully-extended selves.

figure 2: through the studies of small objects, ultimately the students learned a degree of patience required to develop a drawing of an architecture interior, articulating the nature of the surfaces and the intangible qualities of light, shade and shadow. On the left is the interior of the Spencer Museum at the University of Kansas; on the right is the interior of the Nelson-Atkins Museum of Art addition by Steven Holl. (first drawing by Grace Philipp, fall '07 and drawing on right by Ryan Otterson, fall '07)

In this course, I had the students begin by developing two exercises, simultaneously, to find ways to engage their already-developed capacities to observe and verbally articulate their thoughts. I involved them in a series of in-class and assigned drawing exercises. They read Juhani Pallasmaa's *The Eyes of the Skin*, and studied the drawings and writings of Peter Zumthor's Therme Vals[iv]—(along with photographs, drawings and film that I have documented previously). Our focus was to use these two sources as a means of relating some basic ways in which a well-known building draws out human engagement.

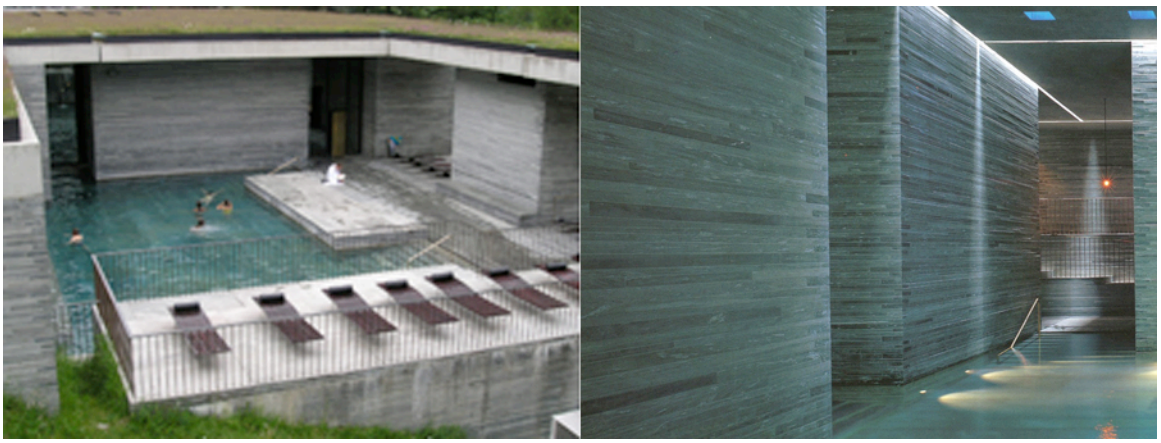


figure 3: the Therme Vals, by Peter Zumthor, serves as an architectural example for students to visualize and relate architectural spaces to human experience through the multiple senses. (Photographs by Shannon Criss)

Photographic, film-documentation and writings (by Zumthor) provided us the opportunity to discuss perceived sensorial experiences that defined the specific material and conceptual ideas of the work—this material drew out thoughts from the students in

written and sketch form. It was my hope that this open, shared processing established productive dialogue in the studio to discuss the bodily senses in context of a built work of architecture—ultimately helping the students articulate issues.

In the discussions, specifically we used the analysis of the Therme Vals to explore how architecture can be developed to related to the natural, surrounding landscape. Zumthor is not at all casual about how to draw out the sensual in the building and relating it to the landscape: he adopts very clear ordering elements that allows the user to repeatedly be made aware: a slip of light enforces the human pace, units of stone enforces a scale related to the human body, different sensual responses are sponsored through water temperatures, colors, material surfaces, and a variety of aural ranges as made present in the proportions and frequency of the room-units. The architecture is in fact precise and highly abstract, but this clarity is born out of the multiple senses.

By relating Zumthor's built architecture with Pallasmaa's writings, the students were able to visualize and relate: "this architecture makes us experience ourselves complete, embodied and as spiritual beings."[v] Our peripheral vision, our haptic sense, our sense of smell, of hearing, or recalling, of anticipating; all of these envelop our flesh—literal and that which is constructed in architecture.

Walter Benjamin establishes that we must maintain a sense of 'aura,' or an authority of presence in a work; this is the necessary quality for an authentic piece of art. "The authenticity of architectural experience is grounded in the tectonic language of building and the comprehensibility of the act of construction to the senses. We behold, touch, listen and measure the world with our entire bodily existence, and the experiential world becomes organized and articulated around the centre of the body. Our domicile is the refuge of our body, memory and identity. We are in constant dialogue and interaction with the environment, to the degree that it is impossible to detach the image of the Self from its spatial and situational existence."[vi] The students begin to appreciate an approach to architecture that is particular and focused upon a unique program type shaped around the body. My point with all of this is that we must get students to a point where they are cognizant of their multiple senses and capable of harnessing these as basic guides to their work. How do we get them started in this direction? It was my hope that through this exercise, the students move from a sense of detachment to a place that allows them to be connected with their multiple capacities to sense and ultimately illustrates how one might internalize that in architectural idea and form. I believe that this transition could be useful to the beginning design student.

cultivating productive working space

As an architecture instructor it is possible to control outcomes by instructing students in *how* to make something rather than adopting an attitude about *why* we should make something. It is much more efficient and we can control student outcomes if we give clear instructions that suit our own predilections. Our tendency is to want to provide students with a series of prescriptive exercises so that they can easily be successful, in fact prescribing how to draw what one sees, rather than putting materials in the hands of the students to see what they discover. It can lead to messy and unpredictable results; students can misinterpret what they see, which runs against our tendency to want to run in the pack. As faculty we must resist the tendency to create consistency in the classroom and accept, and even encourage, diverse and risky responses.

It seems essential that the design studio create a space for slow, fully senses and messy investigations. Like the slow-food movement, we must consciously acquire slowness in our way of understanding the world. By attempting to create that slow space in the studio, where students sit and draw for four hours at a time it is very difficult (at first) for them to remain focused and patient for this extended period, but over a few sessions they learn the rhythms and develop some patience for discovering the object and space before them. By making drawing what the students sees before them difficult, the student becomes focused on the medium rather than the 'thing' before them—they soon learn that it is not easy to be an 'expert' from the start. For the first couple of sessions, I direct the students to draw blind contour drawings by putting blind folds on them and having them draw by touch, holding the object for an extended time and then draw from memory. All of this is to help them use their sense of touch to help them draw and to *see* through the touch. They learn to translate what they feel to the surface of the page.

The following drawings are on large 18" x 24" papers, mostly with charcoal. Most students have no experience with charcoal and find it extremely difficult to work with at first. They struggle to know how to use it to reveal the surfaces of the object before them; they tend to outline and fill in the surfaces. [fig. 4a and 4b]

figure 4: left image (a) : early sketch where student over-exaggerates the outline of the objects before them (by Abby Brandenburg, fall '07); center image (b): student struggles to give form to the tree by heavy emphasis of the lines (by Grace Boudewyns, fall '06); right image (c): student begins to show the surfaces of the object with light and shade marks (by Lauren Brueckmann, fall '07)

figure 5: left image (a): student begins to explore surface and loses the emphasis on the lines, really starts to see the highlights and use the color of the page as an element of the drawing (by Ryan Otterson, fall'07); center image

(b): student works against the use of the line and only emphasizes the highlights and deep shadows, the form begins to have shape and lifts off the page—except for the shadows (by Sam Hernandez); right image (c): student begins to see the deep spaces of the object, giving the object depth and form (by Grace Philipp, fall ’07)

But, very quickly, I encourage them to stop outlining the object and to identify landmark situations to mark and to draw out the surfaces between those landmarks. I keep working with them to use the long side of the charcoal stick, rather than the pencil point—they soon become more comfortable with making surface strokes. [fig.4c] Very soon they are working back and forth between identifiable landmarks, or moments in the surface of the object and working the surfaces. [fig.5a] It is messy and uncontrollable at first, but soon, they find ways to manage it by paying close attention to what they see before them, more and more focused upon the surfaces. [fig.5b] A student discovers that the pitcher has an interior dark space that draws the eye within; they start to see more complex nature of the object. [fig.5c] Here the student starts to see the object sitting on a table—it starts to have context; they begin to see an object casting a shadow and the surface of the table reflecting light—they see cause and effect before them; the object is interactive with its surroundings. [fig.6a] In this drawing, the tree and surface beyond—more complex relationships between object and subject matter; the shadows merge with the strokes of the bark—the object and subject merge. [fig.6b] The object interacts with surface and the object is no longer centered—it shares space with the subjective space, loses its centeredness. [fig.6c]

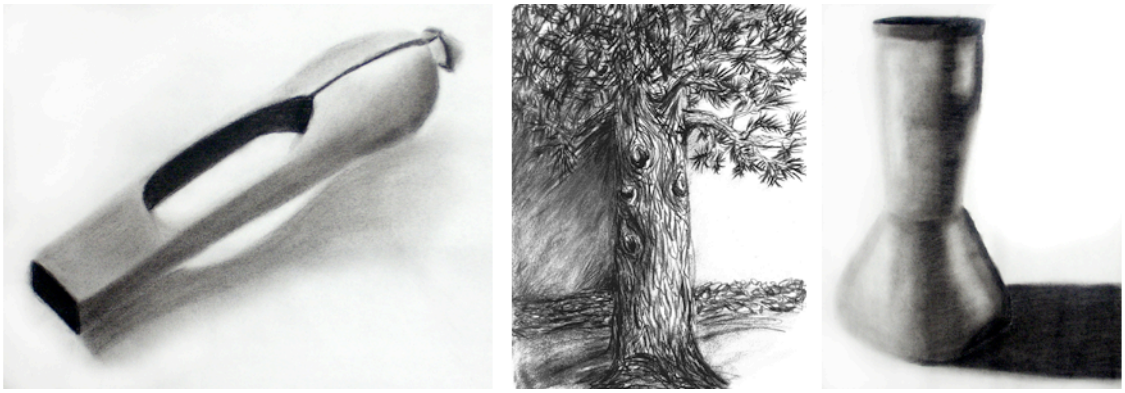


figure 6: left image (a): not only does the form start to have more controlled articulation, but it also starts to use the cast shadows on the table to accentuate its form (by Alex Jones, fall ’07); center image (b): the use of lines are defining both the object and the cast shadows—the student works back and forth between the two (by Grace Boudewyns); right image (c): this object starts to consider the object and the shadow as equal elements in the space of the page it is drawn (by Chris Clark, fall ’07).

figure 7: left image (a): emphasis is given to the effects of the object rather than the object itself (by Maggie Walck, fall ’07); center image (b): student focuses upon the details of the object and the recognition of the object is lost (y Kathleen Sis, fall ’07); right image (c): partial object and cast shadows become unified in this drawing (by Maggie Walk, fall ’07)

Here, the student breaks the centered object—we start to lose object-recognition and really focus on a very small portion of the object, students lose the 'thing-ness' of it and begin to draw out the highlights, the shadows, multiple shades of the surface, begin to focus on the minute textures and exact details of the surface. [fig.7a] The student finds the subject of the object before them and 'lose sight' of the identity of the object, gaining a fuller sense of what they see before them. [fig.7b] The start to recognize and explore the range of surface that their eyes are able to see. [fig.7c]

figure 8: This well-known example of the Gestalt, where we don't recognize the Dalmation dog sniffing the ground in the shade of the trees at first, but then, we can work our eye back and forth between the 'object' and the surrounding 'subjective' space. Just as this drawing illustrates, I believe students begin to see the entire surface in this new way. This image is in the public domain due to its age. The Dog Picture is familiar in vision circles as a demonstration of emergence in perception. From Marr D. (1982) Vision W. H. Freeman, New York NY., p. 101, Figure 3-1, where it is attributed to R. C. James.

Students gain the form-forming capability of our senses—by visually recognizing the figures and whole forms instead of just a collection of simple lines and curves. [mapping surfaces] By losing their intense focus on the 'object' they become aware of the 'subject' and can soon move back and forth between the two more easily.

The students start to recognize the sources of those highlights and the sources of the light that cast shadows. They map and create their own way of providing reference to where they have been-through multiple marks and subtle distinctions. With that in mind, students then bring their focus to the edge of the object, where the object is silhouetted against the surface it sits on or against.

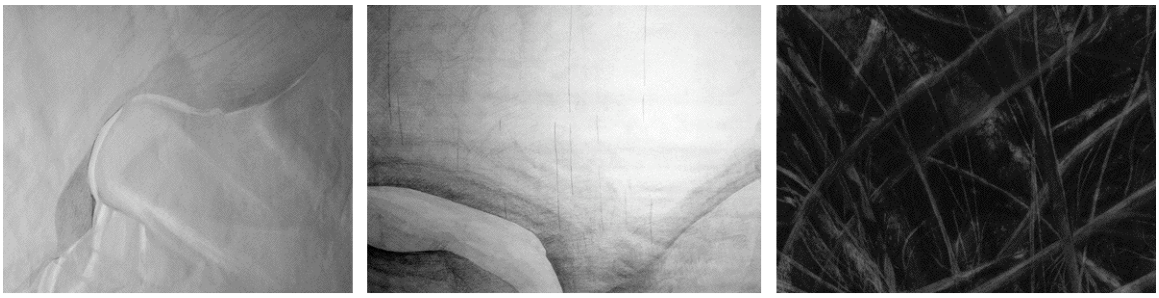


figure 9: each of these images illustrates the complete focus on the interaction between the object and the background—illustrating the students' capacity to completely focus upon the cause and effect of the object on its background and vice versa. (left image by Lindsay Brisko, center image by Grace Philipp, and right image by Anne Bruce)

James Elkins underscores what many of the students experienced in his book, *How to Use Your Eyes*, he says, "It's about stopping and taking the time to simply look, and keep looking until the details of the world slowly reveal themselves. I especially love the strange feeling I get when I am looking at something and suddenly I understand—the object has structure; it speaks to me."[vii]

Entranced, mesmerized by the situation before one—it is finding that state of mind and learning to be comfortable with that state of mind and intense focus that forces a heightened awareness of all senses translated through the hands and onto paper. Students experience themselves in the object and the object exists through their embodied experience. The object and the body supplement and define each other. The student soon becomes aware of this interactive space between subject and object and this occupies their thought processes—in a way they begin to daydream and find the pleasure in making depth, light, texture—their drawing reflects their world around them—the concept of the world is in the drawing.

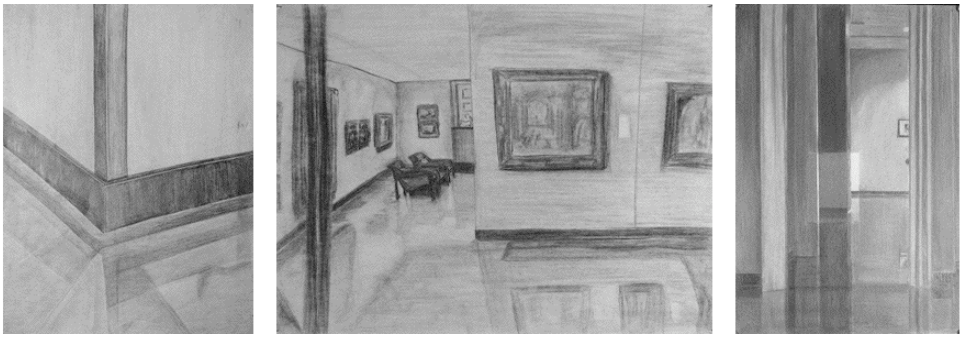


figure 10: left image (a): by beginning at a close-up look of an architectural element (corner of walls with reflective floor), the student is able to focus upon the cause and effect conditions of an architectural space as the departure point; center image (b) and right image (c): by using a photographic image of a portion of the room as a reference, the student learns to gauge their focus by this element, and develop an ability to remain focused upon the highlights and shadows of the room. (All drawings by Grace Philipp, fall'07)

Now, if we move the student from a classroom to a building interior, they demonstrate their skills to see the subjective space of light, shadows, shading, and material surface. [see figures 10a, 10b and 10c]We must create opportunities for students to spend long periods of time to just spend time with objects out in the world that teach us by merely being. By slowly examining objects and discovering their surface, their structure, their

particular attributes, students learn how to see and if open to it, can learn how to be patient and learn to explore without a purely-conceptual predisposition.

figure 12: repetition from different points of view or distances from the object shifts and requires that the student explore the same context in subtly different ways. Students aren't inherently comfortable with this pace or repetition, but through time they start to see how their 'getting lost' with the work allows them connection and abilities they didn't know they possessed. They begin to turn their minds off and daydream as they draw. (drawing by Grace Philipp, fall'07)

translating the subjective touch to the objective form

Grounding experience in this daydream-state-of-mind, the touch leads the body to 'knowing' 'the form—gaining a trust and security in that knowledge is the first path to trusting one's intuition and intangible, peripheral knowledge of things and places. Merleau-Ponty's study of perception let him to recognize that one's own body is not only a thing, but a part of the perceptual openness to the world. He placed a primacy of experience as an active dimension—"the nexus of meaningful relations between objects within the world."[viii] We encounter meaning through things and so our bodies become unified with an open-ended world. With this in mind the students began their design process by gaining an understanding of a hand-tool by holding it in hand and learning to draw its form, the forces it exerted in use and the series of changes it makes as it goes through its particular motions. [see figure 13]

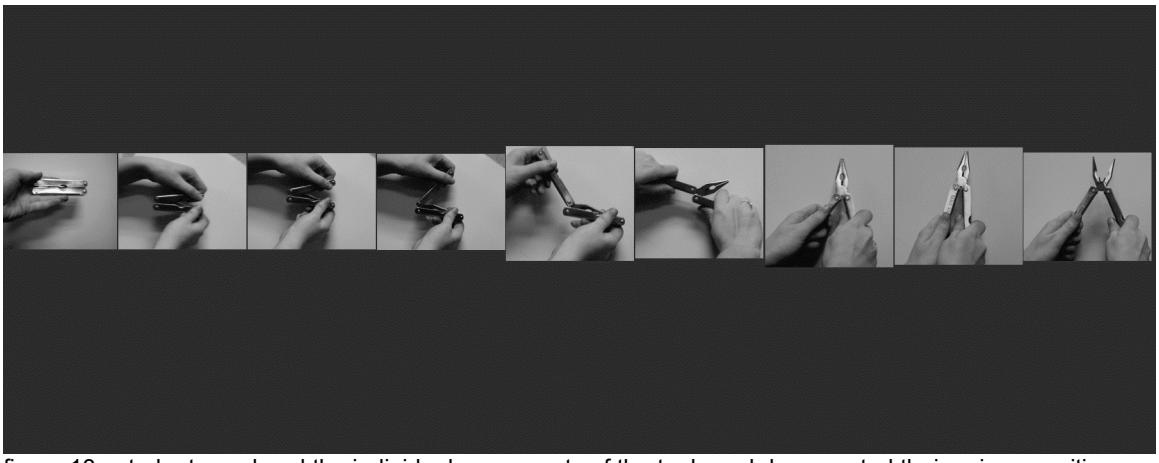


figure 13: students explored the individual movements of the tools and documented their unique positions and forces that were being exerted. (study by Ryann Pinney, fall'07)

The students found that it takes focus and ability to translate the touch of the tool to a drawing. Ultimately, this drawing represents the full-action space of the tool [see figure 14]. It is up to the student to determine the pace, the particular moments that are significant to that movement, how to make separate yet overlapping connections between the movements, and ultimately how to translate it to the page. Just like charcoal challenges, taking dimensions from the tools via calipers requires a careful commitment to figuring out which points to translate and which drafting tools to connect those points. Meanwhile, the students struggled with the line weights and the appropriate ways to reveal the objects. Drawing is a process that oscillates between idea and the physical form, it becomes the commemoration of the idea. Each drawn line interprets the act of the tool rather than the representation of the thing. The drawing reveals the idea of the syntactic form through the medium of the lines.

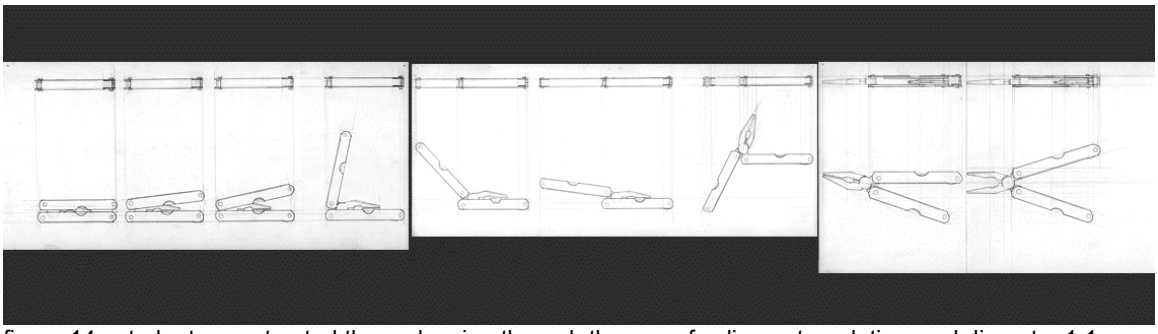


figure 14: students constructed these drawing through the use of calipers, translating each line at a 1:1 correspondence between tool and the page. Students learned to establish 'construction' lines and the correspondence between plan and elevation drawings. (drawing by Ryann Pinney, fall'07)

What is useful about these projects is that the students have gained insight into the form, embodiment of the forces the object holds and the space of the tool from direct experience. They translate that knowledge through their hands as they hold the tool, through calipers, point-by-point, they must keep focused and proceed carefully. Through this interaction, they must set up 'construction' lines and learn how to draft lines and arcs, attempting to make them seamless and with careful attention to coding information with line hierarchies. They look carefully to determine the perceived lines that indicate a change in a surface. Back and forth, they translate what they see to what they project on the page. The process that requires their craft and critical eye helps them translate their sense of depth and sense of timing. There isn't an immediate

right or wrong answer—they must interpret what they see. Every strike on the page must be thoughtful and precise and related to the critical speed, emphasis, overlap/distance of the tool.

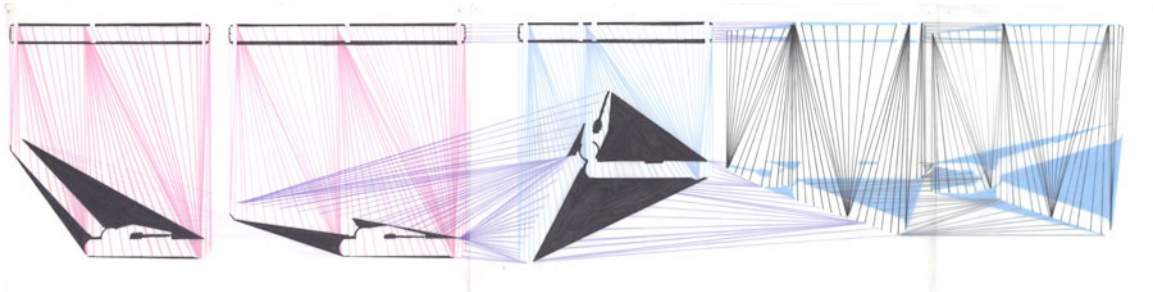


figure 15: these movements describe the motion of the tool; this drawing is the basis for the next exercise. (drawing by Ryann Pinney, fall'07)

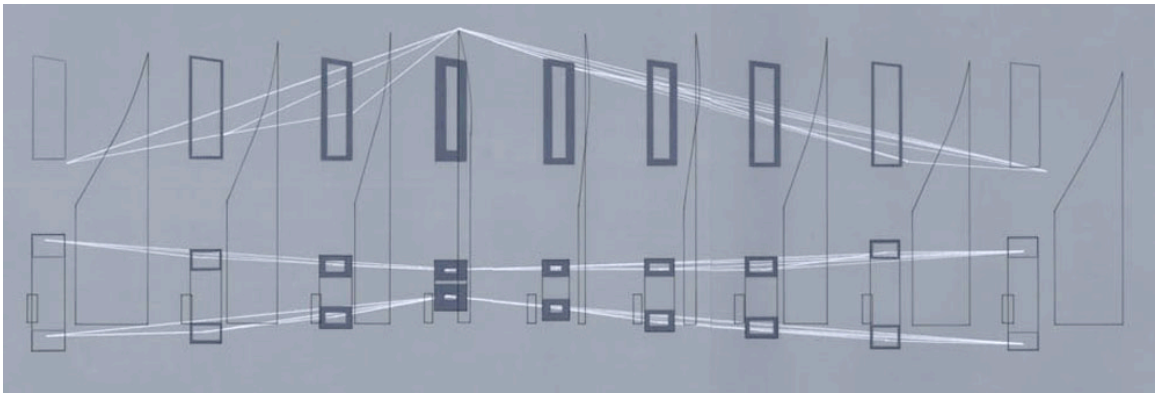
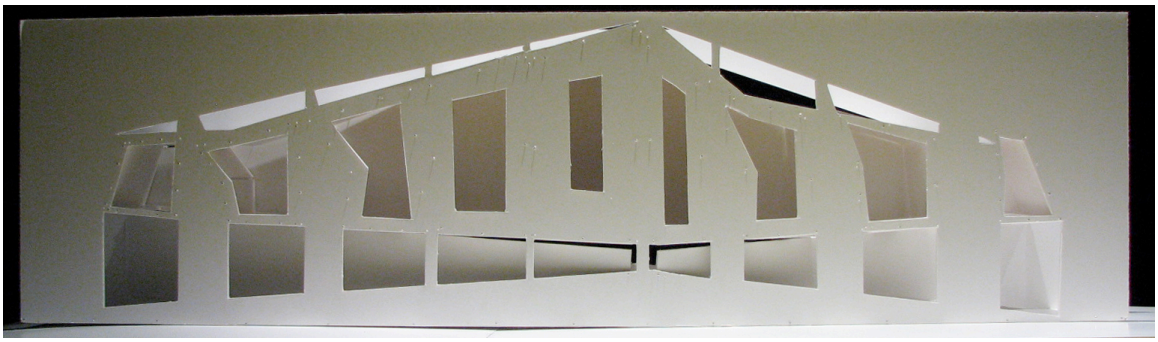


figure 16: another version of a student's interpretation of the forces and spaces of the tool (drawing by Grace Philipp, fall'07)

Once this was complete, the students then interpreted those lines with another graphic representation that attempted to accurately reveal the particular elements of the tool, places of contact of the hand with the tool and the precise movements and forces of the tool. [see figures 15 and 16] Ultimately, the students had a couple of versions of this and then went one step further—developing a 'parti diagram' of their interpretation. What this did was help them define the critical tempo, space and boundaries of their tool. It became the new 'frame' for another series of exercises; once again interpreting the project from a 2D to a 3D description, within the confines of a 6-sided volume limit (proportions and size up to them). [see figure 17]



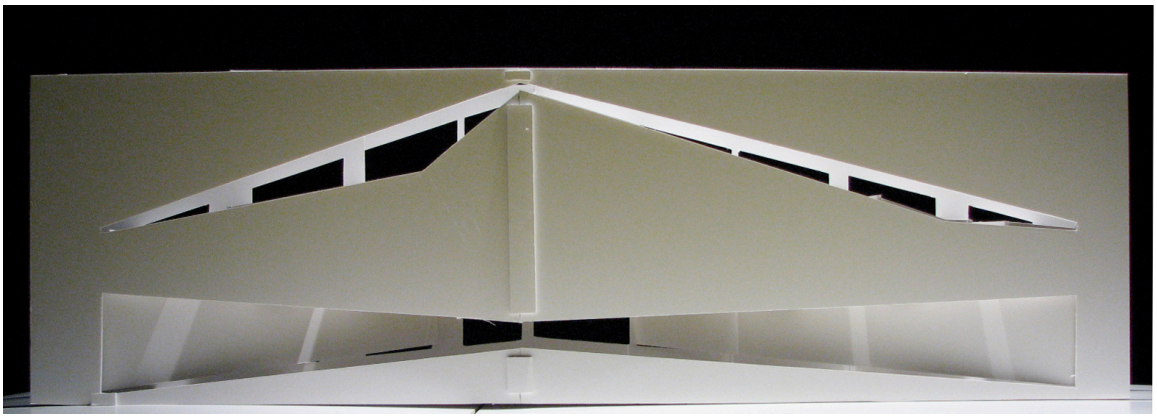


figure 17: studies in foam core, which help to transform the 2D representations to 3D spatial studies (study models by Grace Philipp, fall'07)

By building a range of models, incrementally related, attempting to be faithful to the internal structure of their parti diagram and interpreted line drawings, the students developed 3D space. Ultimately, they were asked to consider light, shadow, shade, views through and movement around the volume (all 5 sides, they all had 'bottom' surfaces that sat on the desk). These subjective, changing qualities once again required that they rely on their larger set of senses and required them to interpret what they saw. These criteria motivated and provided critique to the work. Ultimately, the students were required to work with birch plywood sheets, which added another set of challenges in the woodshop using a new set of tools, finding the capacity of the material to perform (or not), determining a logical order in assembling, etc. [see figure 18]

figure 18: interior views of the forms created, made in Baltic Birch plywood. (model by Grace Philipp, fall'07]

The material required another whole level of focus and set of translations from idea to form. All of this was informed by the intangible qualities of light, focused and peripheral vision and movement around—related to the form. The beauty of it all was that the students were paying so close to the space between the surfaces, the quality of light, the potential for cast shadows, setting up relationships between particular surfaces and openings, that they had no room for 'conceptual,' outside notions—their focus was on the internal order of things. Ultimately, those lessons we drew out by exploring Zumthor's Therme Vals, helped the students connect to the form before them—although not representative of a building, but rather an object they could hold and observe. Ultimately, it is the human experience, the embodiment of the form through the pace of the moving body, the pace of the moving eye, the relationship to the material elements

as related to the scale of the body….all of this correlates to the form in front of the beginning design student.

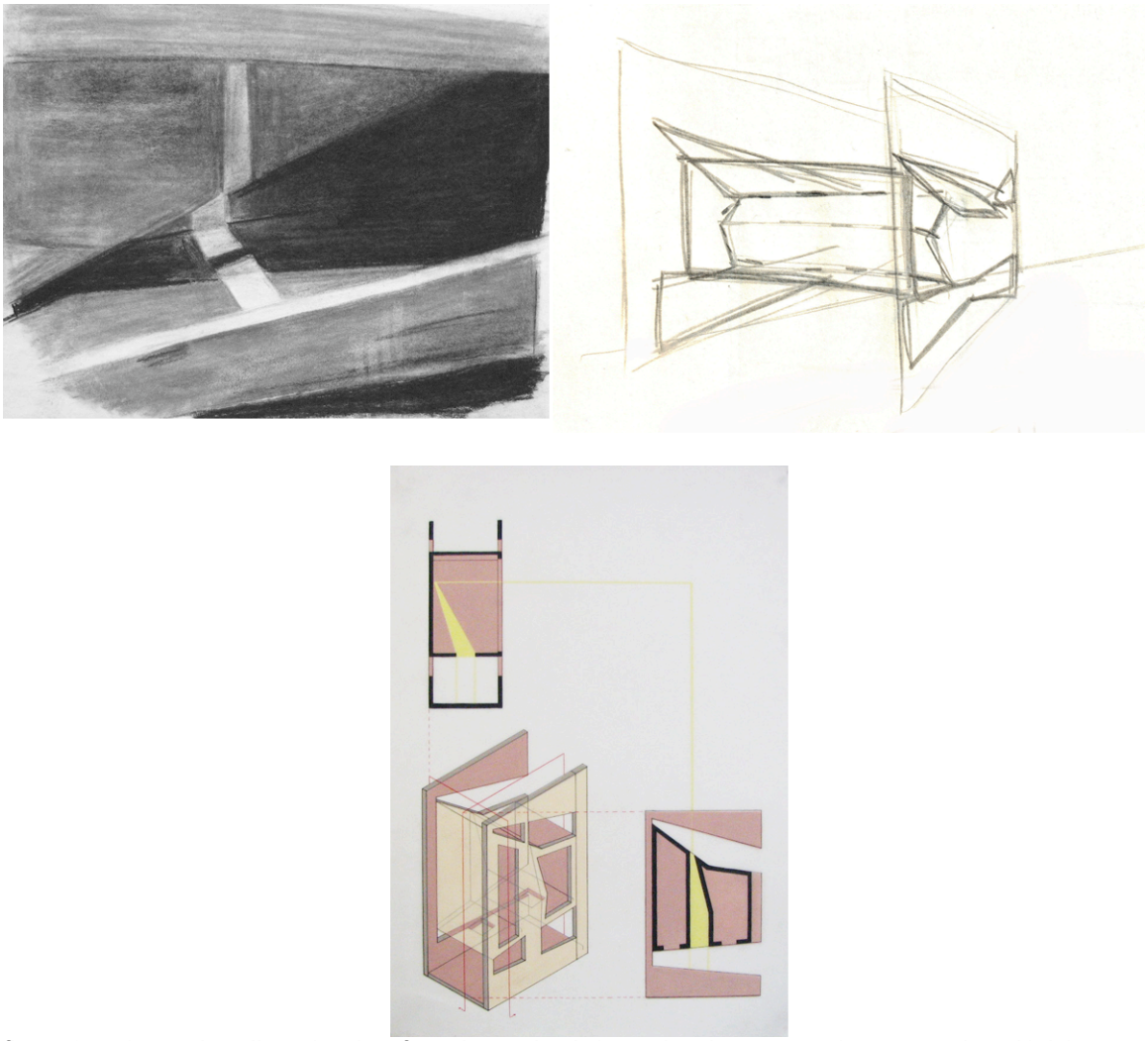


figure 19: charcoal studies, sketches from the student's journal and constructed axonometrics with ink on mylar and prisma color—all of these studies were developed in order to understand the work from different points of view. (drawings by Grace Philipp, fall'07)

Ultimately, the students drew out the axonometric, sectional, and plan representations—understanding the architecture ideas and form in precise ways. Their focus was so clear and sincere, that they didn't have to dream up conceptual notions, it became evidenced before them. I think the process has been extremely fruitful and generally the quality of the work high for a first-semester student in architecture.

conclusion

Alienating students from what they think they know allows them to depart into a new realm of understanding—requires students to take risk and trust their full set of senses *first*, over their strict reliance upon mind/eye preconceptions. I believe that this is the strength of these drawing exercises and projects. Students are forced to dim their sharpness of vision and gain a sense of their less-known peripheral vision, sense of touch, understanding of time, capacity to internalize orders and translate those into architectural form and idea. The drawing oscillates between idea and the physical, built reality of things and forms. The architectural drawing is not rendered, but rather

constructed so that it reveals the syntactic form through the medium of lines, anticipating the sensuality of material, light and inhabitation.

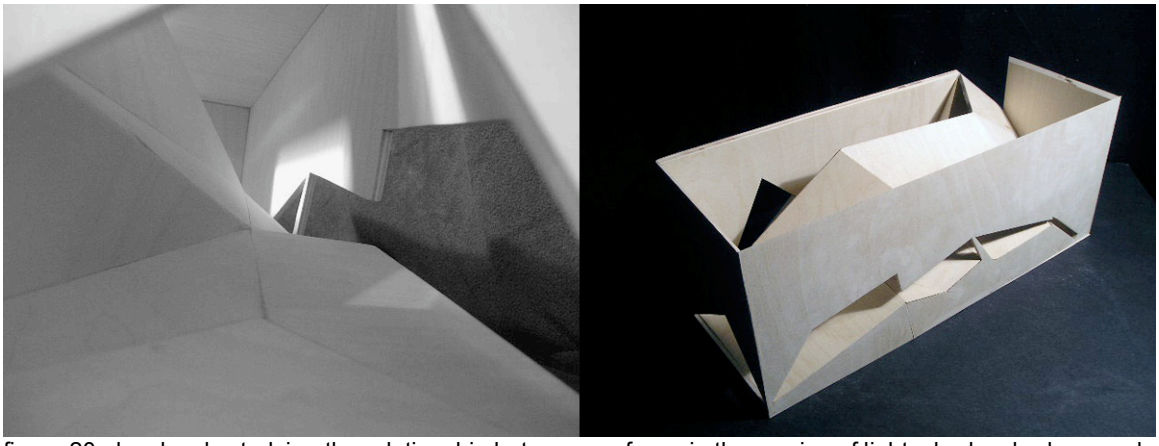


figure 20: by closely studying the relationship between surfaces in the service of light, shade, shadows and views through, the form was derived (study by Matthew Holderbach)

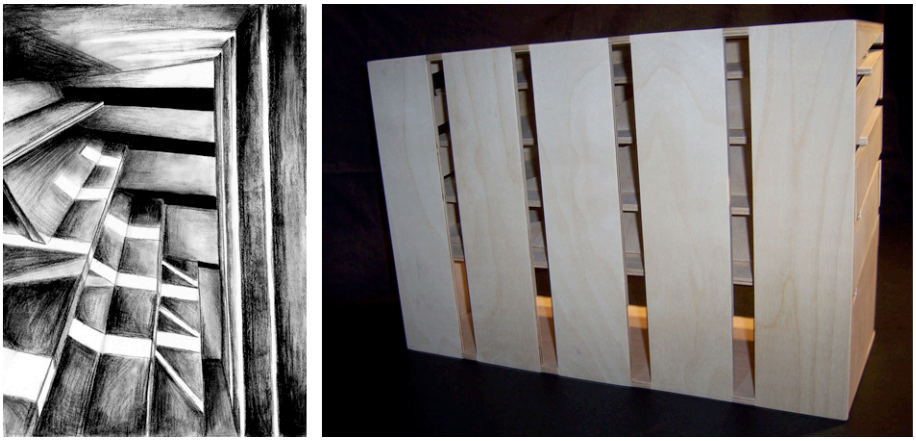
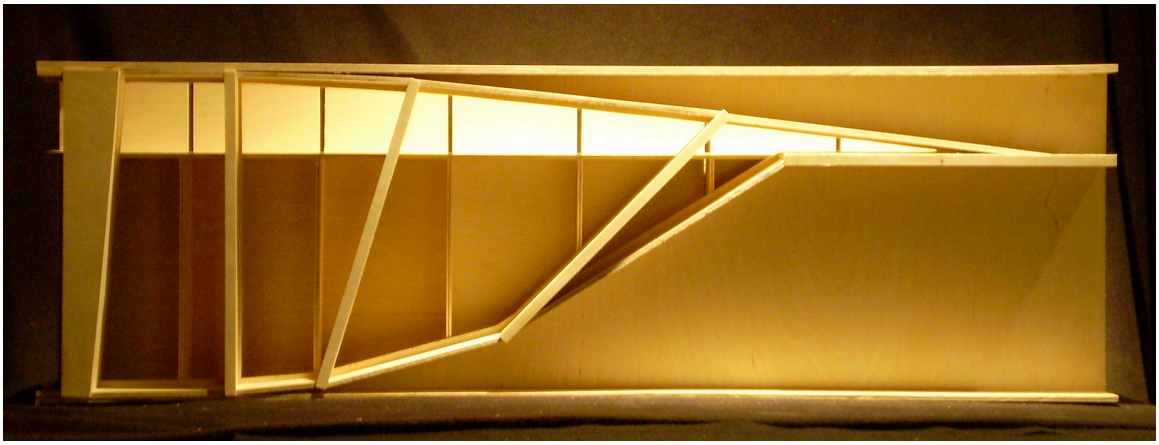


figure 21: this student explored the interior surfaces in charcoal and derived the specific size of openings based on those observations (by Grace Boudewyns)



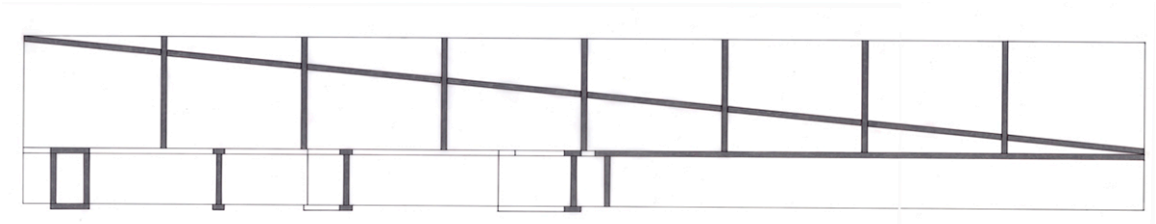


figure 22: model and drawing studies by Ryan Otterson, fall'07.

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[i] Juhani Pallasmaa, *The Eyes of the Skin*, John Wiley & Sons Ltd, England, 2005.
[ii] Pallasmaa, *The Eyes of the Skin*.
[iii] Steven Holl recently complete an art gallery addition to the Nelson-Atkins Museum of Art in Kansas City, Missouri; it is known as the Bloch Building.
[iv] Therme Vals is a spa situated on a thermal spring in Graubunden, Switzerland.
[v] Pallasmaa, *The Eyes of the Skin*.
[vi] Benjamin, Walter and Peter Demetz, *Reflections: Essays, Aphorisms, Autobiographical Writings*, Harcourt Brace Jovanovich Publishers, New York, 1978.
[vii] Elkins, James, *How to Use Your Eyes,* Routledge Publishers, New York, 2000.
[viii] Langer, Monika, *Merleau-Ponty's Phenomenology of Perception*: *A Guide and Commentary*, The Florida State University Press, Tallahassee, Florida, 1989.